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Malekigorji, M., Corbett, D., Rooney, D., Hanna, L-A., & Hall, M. (2018). Assessment of Chinese Students' Progression and Perceptions in Blended Team-Based Learning Approach at an International College in China. In *World Congress on Education: WCE-2017* (pp. 58-60) <https://doi.org/10.2053/WCE.2017.0042>

**Published in:**  
World Congress on Education: WCE-2017

**Document Version:**  
Peer reviewed version

**Queen's University Belfast - Research Portal:**  
[Link to publication record in Queen's University Belfast Research Portal](#)

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# Assessment of Chinese Students' Progression and Perceptions in Blended Team-Based Learning Approach at an International College in China

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## Abstract

Blended team-based learning (TBL) as a major component of an undergraduate course was implemented at a UK joint college in China. The core components of TBL were introduced in the course for Chinese students and their academic performance and course evaluation data with blended TBL approach was compared with solely flipped classroom and traditional lecture-based courses. Students' perceptions regarding traditional learning and TBL were investigated and compared through the use of an online perceptual learning style preference questionnaire.

Students ranked blended TBL as a superior method of learning in comparison with didactic lecturing style. Higher data retention and classroom performance was achieved within blended TBL course compared to traditional learning style.

Students' perceptions and performance suggested that blended TBL can benefit non-native English speaker students, who are studying in a remote campus, where English language is not the first spoken language and provided positive feedback on their preparedness may help them to develop higher reasoning skills.

## 1. Introduction

During the past two decades, many UK universities are expanding their internationalisation activities in volume, scope, and complexity and introducing initiatives such as borderless higher education, study abroad and student exchange programs. These initiatives are being developed by a number of factors, such as pressures for life-long learning, the emergence of the 'knowledge economy,' and developments in the use of communication technologies [1], [2].

Among different internationalisation strategies, international branch campus (IBC) scheme has become more demanding, which is the physical manifestations of the home institution within another country [3]. Although these newly developed IBCs meet the general requirement of international higher education, and assist their home institutions by providing expertise and resources, they experience numerous administrative and educational challenges for both educators and students. Therefore, appropriate and blended educational strategies must be applied to tackle with emerging challenges such as cultural differences, technical English language, assessment techniques and educational ethos and students' lack of familiarity with home institution teaching approaches.

Considering the high ratio of Asian students across the UK Universities, different teaching strategies have been proposed to meet the needs of these learners studying in higher education. There are three main difficulties in learning for Asian students: 1) difference in learning style, 2) cultural barriers, and 3) language problems. Asian students are reported to be passive recipients in education (being "spoon-fed" by the teachers [4]). They are more active in one-to-one interaction with the teacher as well as engaging in peer discussion outside the class [5]. In addition, anecdotal evidence shows

Asian students are less likely to express their opinion, unless being asked, and also make use of repetitive strategies in learning. However, these students are seen to change their practices in many respects, as they learn in, and from, British academic cultures [1].

Learning in small groups has been introduced and applied in higher education since the 1970s [6].

However, according to pedagogical literature, many lecturers within healthcare education continue to dominate their instruction with traditional methods of teaching in postsecondary education [7], [8]; despite of the strong evidence that learning is often better achieved by using active teaching methods, whereby students engage in activities, such as reading, writing, discussion, or problem solving that promote analysis, synthesis, and evaluation of class content [9].

Team-based learning (TBL) is a special, in-depth approach, which has been shown to contribute substantially to the enhancement of students' competitiveness and employability [10]. TBL has been shown to improve medical students' exam scores, as compared to small group lectures [11]. It also contributes to research, allowing academic staff to engage in research-led teaching, bringing the latest business and scientific developments directly to the students. TBL approaches also encourage students to work independently and constructively using academic staff as mentors and supervisors. It is a learning philosophy according to which students must actively engage in finding problems, and the answers to these problems. Student-centred active learning strategies such as TBL also encourage students to pursue their own learning objectives and paths [5]. It has been proposed that TBL courses produce statistically significant higher than average scores in end of term or national exams [12].

TBL is a structured form of small-group learning that emphasises student preparation out of class and application of knowledge in class. Students are organized strategically into diverse teams of 5-7 students that work together throughout the class.

Before each unit or module of the course, students are directed to prepare by reading supplied and directed materials prior to class. This method gives students the opportunity to make use of their new knowledge and course concepts to solve problems.

## **2. Rationale and design of the study**

In 2015, Queens University Belfast established a joint college with China medical University in China

(CQC). In the first semester, traditional teaching style was provided to the first batch of pharmaceutical sciences and pharmaceutical biotechnology undergraduate students at CQC. From the second semester, the method of teaching was changed to flipped classroom approach (students reviewed online lectures prior each session) as the rate of failure was relatively high in the first semester. In order to create more interactive learning environment, flipped classroom was blended with team based learning approach from the first semester of the second academic year.

## **3. Result**

We reduced the total amount of time students spent in a traditional classroom by 10% while lectures were shifted online and the class time was mainly spent in an active learning environment. TBL was seen to work exceptionally well, despite the typical problems that students can experience working in as a team. There was evidence that students developed useful knowledge and lifelong learning skills for their future academic life. In general students had more positive than negative comments and collaboration was strongly associated with positive statements. TBL proved to be a superior method than traditional learning approach in our industrial pharmaceuticals course in terms of classroom performance and engagement.

## **4. Conclusion**

Our research question essentially asked if we could achieve higher student's stratification in learning, improve collaborations and classroom engagement and other skills such as critical

thinking and data retention within blended TBL approach versus only flipped classroom and traditional lecture based styles and our findings support our hypotheses. For the purposes of this study, though, we recognised that Chinese students require participating in active learning practices more than the UK students due to the previous passive learning experience in their past studies.

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